ZyXEL

ZyXEL green

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- Dual-mode VDSL2/ADSL2+ Functionalities
- Dual WAN to Simplify ISP Logistics
- 802.11n Technology for Extreme Performance and Coverage
- Internet Access through 3G Networks*
- Quality of Service (QoS)
- TR-069 Remote Management

P-2812HNU-51c

802.11n VDSL2/ADSL2+ VoIP IAD

Dual WAN 802.11n VDSL2/ADSL2+ VoIP IAD

Benefits

Dual-mode VDSL2/ADSL2+ Functionalities

The ZyXEL P-2812HNU-51c supports dual-mode functionalities that enable service providers to support both ATM and PTM networks with a single device. It offers bi-directional high-speed VDSL2 and VDSL connections with speeds of up to 100/45 Mbps in PTM mode and 24/1 Mbps ADSL2+/ ADSL2/ADSL connections in ATM mode. The powerful features ensure service providers to support connections over newer IP networks and also on their legacy ATM networks with a single CPE gateway.

Dual WAN to Simplify ISP Logistics

When ISP migrates the service from VDSL2 to PON, or WiMAX, subscribers can keep existing P-2812HNU-51c for terminating the IP-connection but now via the Ethernet WAN, originally DSL WAN. The end-users can still experience in most cases from the original CPE, and which is better than the case that customer have to change current CPE due to the difference of physical connection.

802.11n Technology for Extreme Performance and Coverage

The P-2812HNU-51c features 802.11n technology that provides the ultimate solution for both speed and coverage. With wireless data rates of up to 300 Mbps, the P-2812HNU-51c provides stable, reliable wireless connections for high-speed data and multimedia usages. It eliminates dead zones and extends coverage by using IEEE 802.11n technology while retaining backward compatibility with any IEEE 802.11b/g Wi-Fi certified device.

Internet Access through 3G Networks*

The P-2812HNU-51c with USB interface for 3G USB dongle provides convenient Internet access to 3G networks for eliminating limitations of wired networks and further extension to the last-mile connectivity. In Internet-challenged environments like rural or mountain areas, the 3G connectivity may be the only viable solution; it can also be used for providing temporary Internet access to places like exhibition booths as well. Furthermore, 3G access can be deployed as a WAN backup for high-availability Internet connection in office environments.

Quality of Service (QoS) Support

The P-2812HNU-51c comes equipped with essential ATM and IP QoS features. Service providers can freely design their QoS policies and prioritize the mission-critical services such as IPTV and VoIP based on their service plan offerings. This increases network efficiency and productivity that enable service providers to offer real multi-play meeting the needs of residential users.

TR-069 Remote Management

With the P-2812HNU-51c incorporating TR-069 standard management specifications, service providers can manage and configure these client devices remotely without any end-user intervention. This feature offers users a true "plug-and-play" experience while reducing deployment complexity, therefore helps saving the operational and maintenance costs for service providers.

Dual WAN | 10/100/1000 Ethernet | VDSL2 ADSL2+ Fallback | VoIP | QoS Media Streaming | TR-069 | b/g WiFi n CERTIFIED | 300Mbps 802.11n | TAIWAN EXCELLENCE 2010

P-2812HNU-51c

802.11n VDSL2/ADSL2+ VoIP IAD

Specifications

System Specifications

VDSL Compliant
- ITU-T G.993.1 (VDSL1)
- ITU-T G.993.2 (VDSL2)
- ITU-T G.994.1 (G.hs)
- ITU-T G.997.1
- Support VDSL band plan, Annex A, Annex B, 997, 998
- Support VDSL profiles, 8a/b/c/d, 12a/b and 17a

ADSL Compliant
- G.992.1 (G.dmt) Annex A compliant
- G.992.2 (G.lite), Annex A compliant
- ANSI T1.413 compliant
- G.992.3 (ADSL2) compliant, Annex A, L and M
- G.992.5 (ADSL2+) compliant, Annex A and M (Annex M support 2 Mbps for upstream)

Wireless
- IEEE 802.11n compliance
- Frequency: 2.4 GHz
- Data rate: 300 Mbps
- Backward compatible to 802.11b/g
- Static and dynamic WEP key (64/128 bit)
- WPA/WPA-PSK
- WPA2/WPA2-PSK
- MAC address filter (up to 32)
- Auto channel selection
- Multiple SSID (up to 4)
- WDS (Wireless Distribution System)
- Multicast traffic pass-through
- WPS (Wireless Protected Setup)

Voice Functionality
- SIP (RFC 3261) version 2
- SDP (RFC 2327)
- RTP (RFC1889)
- RTCP (RFC1890)
- Codec: G.711 (PCM A-law or μ-law selectable), G.729a/b
- Echo cancellation: G.168, VAD, silence suppression, CNG, dynamic jitter buffer
- DTMF detection and generation
- DTMF: in-band and out-of-band (RFC 2833), (SIP INFO)
- Modem and fax tone detection and pass-through
- DNS SRV
- Flexible dial plan (RFC3525 section 7.1.14)
- Session timers (Draft-IETF-SIP-Session-Timer)
- Wideband voice (G.722)*

Phone Features
- Message waiting indicator (RFC 3842)
- Caller ID
- T.38 fax relay
- FAX relay: transparent fax relay over G.711
- IVR (Interactive Voice Response)
- Call waiting
- Call hold
- Early media
- Flash hook timer
- Call transferring (blind and attended transfer)
- Call forwarding
- Three way conference
- Abbreviated dialing (speed dialing)
- Shuttle enquiry call (second call)
- DND (Do NOT Disturb)
- Call block
- CLIP (Calling Line Identification Presentation)
- CLIR (Calling Line Identification Restriction)
- COLP (Connected Line Identification Presentation)
- COLR (Connected Line Identification Restriction)
- Conference call w/media server
- Caller ID generation/detection w/DTMF & FSK format
- Internal call
- Speed dial (phone book)

VLAN/QoS
- Support 802.1Q port/tag based VLAN
- Support 802.1P priority bit
- Support flexible traffic classification by LAN, Eth Type, source IP, and …etc.
- Support 4 priority queue w/strict priority scheme
- Freely assign the classified traffic to queues, VLAN, or PVC
- Per VLAN IPR (IP Routing), (Max 4)
- Per VLAN PPPoE, (Max 4)
- FXS has given highest priority
- Application bind with dedicated PVC
- IP layer QoS (media bandwidth management) for 3-play
- TOS/DiffServ
- VLAN on Ethernet WAN

Management
- Web
- CLI (Command Line Interpreter)
- SSH (Secure Shell function)
- Remote management for Web/Telnet/FTP
- Access control for remote management
- Firmware upgrade via Web/FTP/TFTP
- Text based configuration
- DSL forum TR-069
- DSL forum TR-064*
- 802.1ag (Connectivity fault management)*

Hardware Specifications

- WAN:
  - one RJ-11 connector for P-2812HNU-51c over POTS
  - one RJ-45 connector for Giga-Ethernet WAN port
- LAN: four 10/100/1000M Auto MDI/MDI-X RJ-45 interfaces
- Wireless: one external 2 dBi antenna and one 2 dBi internal antenna
- Button: Reset, WPS/WLAN on/off
- A hardware switch for DSL/Ethernet WAN
- 2 FXS POTS interface
- 2 USB 2.0 host interface (for file sharing/3G backup*/ printer server*)
- Status LEDs indicators: POWER, ETHERNET, DSL, INTERNET, WLAN, WAN, USB, Phone
- Power: 12 V DC 1.5A

Physical Specifications

- Item weight: 555 g (1.23 lb)
- Item dimensions
  165 (W) x 65 (D) x 242 (H) mm
  (6.49 (W) x 2.56 (D) x 9.53 (H) inches)
- Item and package weight: 1,177 g (2.6 lb)
- Package dimensions:
  356 (W) x 197 (D) x 107 (H) mm
  (14.01 (W) x 7.75 (D) x 4.21 (H) inches)

Environmental Specifications

Operating Environment
- Temperature: 0°C ~ 40°C
- Humidity: 20% ~ 85% RH (non-condensing)

Storage Environment
- Temperature: -20°C ~ 60°C
- Humidity: 20% ~ 90% RH (non-condensing)

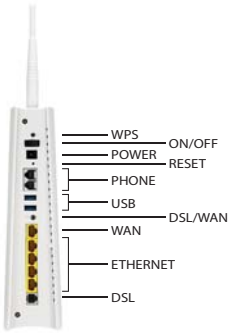
Certification

EMC
- EN55022 Class B
- EN61000-3-2: 2000
- EN61000-3-3: 1995 + A1: 2001

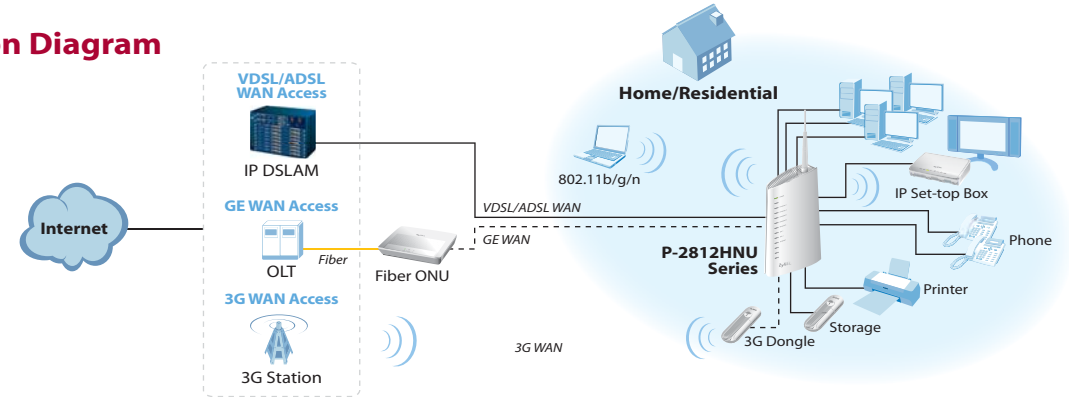
Safety
- EN 60950-1: 2001 + A11
- IEC 60950-1: 2001

** Firmware upgradeable for future enhancement.*

Rear Panel



Application Diagram



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65-100-281201B 01/10